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#### DESCRIPTION

This application is a 371 of PCT/JP02/11131 10/25/2002

ANTENNA DEVICE

TXL 11/07/2006

#### Technical Field

The present invention relates to an antenna device using a microstrip patch and more particularly to an antenna device in which a substantially conical cup is provided around a microstrip patch.

#### Background Art

An applicant of the present invention has a patent right of an antenna device, in which a substantially conductive member is provided around a microstrip antenna, in Japan (Japanese Patent No. 3026171).

In the antenna device of Japanese Patent No. 3026171, it is intended to improve gain and to realize a narrower beam width (here, a beam width represents a half-power width), when compared with the case where a substantially cylindrical conductive member is not provided around a microstrip antenna.

More concretely, whereas although the gain of the conventional microstrip antenna is about 7 dBi, in the above-mentioned antenna device, it is intended to increase gain and to realize a narrower beam width such that a